

JEANNE G. QUINATA
Clerk of Court

Attorney for the Guam Waterworks Authority

UNITED STATES DISTRICT COURT
TERRITORY OF GUAM

UNITED STATES OF AMERICA,

) CIVIL CASE NO. 02-00035

Plaintiff,

VS.

**GUAM WATERWORKS AUTHORITY
and the GOVERNMENT OF GUAM,**

) **DECLARATION OF DONALD**
) **CHARLES ANTROBUS IN SUPPORT**
) **OF DEFENDANT GWA'S REPLY TO**
) **THE UNITED STATES' RESPONSE TO**
) **DEFENDANT GWA'S MOTION FOR**
) **DISPUTE RESOLUTION**

Defendants.

ORIGINAL

1 I, Donald Charles Antrobus declare as follows:

2
3 1. I am a Commissioned Officer in the United States Public Health Service; a
4 registered professional civil engineer in the States of Louisiana and Alaska; and I am Chief
5 Engineer for the Guam Waterworks Authority ("GWA"). I have served in the capacity of Chief
6 Engineer for approximately 30 months. I have personal knowledge of the matters stated herein
7 and, if called upon to testify, could and would competently testify thereto.
8

9 2. As noted in the USEPA November 28, 2007 response to GWA's Motion, GWA
10 was fined in August 2005 for failure to comply with Paragraph 37 of the Stipulated Order
11 regarding the Chaot Wastewater Pump Station. The actual Stipulated Order deadline for
12 completion of the construction work under that paragraph was not the same as the more
13 aggressive time frame established by GWA. GWA was fined for the more aggressive schedule
14 and not for violation of the time frames set out in the Stipulated Order.
15

16 3. The GWA engineering department independently identified deficiencies in the
17 Agana Main Wastewater Pump Station, which is separate from but near Hagatna Wastewater
18 Treatment Plant, and began the steps necessary to fund and implement corrective action. The
19 identified deficiencies and plan of corrective action was communicated to USEPA during the
20 course of casual conversation regarding GWA matters.
21

22 4. In the summer of 2006, GWA and the USEPA negotiated a modification of the
23 Stipulated Order in order to provide additional time for the completion of certain compliance
24 tasks. Both parties agreed that an extension of time was reasonable due to unknown conditions
25 at the time the original deadlines were established. The Stipulated Order Amendment also
26 included revised scopes of work, including the aforementioned Agana Main Pump Station
27 Renovation and the Hagatna and Northern District Wastewater Treatment Plant Performance
28 Evaluations. These additional projects were added to the Stipulated Order as a "toll" for granting
29 the time extensions.
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31
32

1 5. During the negotiation of the Stipulated Order Amendment, GWA requested that
2 there be added a specified time within which USEPA and Guam EPA would agree to respond to
3 submittals and/or requests for information and clarifications, and that Stipulated Order deadlines
4 be automatically extended if and when these response times were exceeded. Without this
5 stipulation, GWA is held to a project completion deadline that is contingent on USEPA and
6 Guam EPA response time with no commitment from either of these agencies to respond within a
7 reasonable period. It should be noted that Guam Law requires that GWA submit plans and
8 specifications to the Guam Environmental Protection Agency for review and approval at 4
9 development milestones of a water and/or wastewater project (30, 60, 90 and 100% submittals).
10 These reviews can take 6 – 8 weeks each and add more than 6 months to the total project
11 development time. The request for a commitment to a specific response time was denied.
12

13 6. During the negotiation of the Stipulated Order Amendment, the USEPA and GWA
14 developed revised deadlines for various projects based on typical implementation timelines for
15 similar projects. At the completion of that exercise, I requested 6 months be added to each
16 deadline to account for unknown factors such as variable workload of the engineering
17 department, indefinite length Guam Agency review and my own unfamiliarity with the
18 idiosyncrasies of project implementation on Guam. This request was rejected as unreasonable.
19

20 7. Subsequent to the negotiation of the Stipulated Order Amendment, the US Department
21 of Defense announced its plans to relocate marines from Okinawa to Guam along with other
22 measure to expand the military presence on Guam. This federal action has significantly
23 increased the workload of the GWA engineering department who are also implementing
24 Stipulated Order projects. Considering the direct workload required to address the impacts of the
25 federal action, including the need to define and implement projects to ensure capacity and
26 prevent negative impact from unprecedented growth and the indirect workload associated with
27 the review and inspection of speculative developments, I estimate that the workload of the GWA
28 engineering department has increased by 50% as a direct result of this federal action.
29

30 8. The NPDES permits for the Hagatna and Northern District wastewater treatment
31 plants expired in June 30, 1991. Comments herein regarding compliance are based on these
32

1 expired permits that have not been reissued by USEPA. It is assumed that comments in the
2 declaration by Mike Lee regarding compliance are also based on the expired permits.
3

4 9. Declarations by the USEPA are made without USEPA having physically visited the
5 Hagatna treatment plant site since approximately October 2006, prior to the completion of
6 renovation efforts.
7

8 10. It is my understanding that the intent and objective of paragraph 39 and 42 of the
9 stipulated order is that the Hagatna and Northern wastewater treatment plants come into
10 compliance with NPDES discharge permits.
11

12 11. Stipulated order paragraph 42 requires GWA to complete a performance evaluation
13 of the renovated Hagatna Wastewater Treatment Plant (WWTP) "in order to determine whether
14 advanced primary treatment is needed to comply with NPDES permit effluent limitations".
15 GWA has made a determination that advanced primary treatment is not required in order to
16 comply with permit effluent limitation. This determination was made based on an evaluation of
17 both compliance testing (DMR data) and additional operational testing data reviewed by
18 Engineer Supervisor (Wastewater Section), Julie Shane, P.E. and Direct Responsible Charge
19 (DRC) and senior treatment plant operator William "Bernie" Sadler; and by onsite evaluation of
20 the performance of processes at the treatment plant.
21

22 12. The GWA determination that advanced primary treatment is not required to meet
23 permit limitations has been validated by the fact that the plant is in full compliance with effluent
24 limitations. The Hagatna WWTP has been in full compliance with NPDES permit limitations
25 since May 2007. Compliance has been documented via Discharge Monitoring Reports (DMRs)
26 submitted to the USEPA. DMRs are the standard accepted measure of a wastewater treatment
27 plant for compliance with NPDES permits. Mike Lee's declaration that the Hagatna WWTP was
28 not in compliance with NPDES permits in April 2007 (Lee Decl. 15) is based on GWA DMR
29 submittals.
30

31 13. Stipulated order paragraph 39 requires GWA to complete a performance evaluation
32 of the renovated Northern District Wastewater treatment plant "in order to determine whether

1 advanced primary treatment is needed to comply with NPDES permit effluent limitations".
2 GWA has made a determination that advanced primary treatment is not required in order to
3 comply with permit effluent limitation. This determination was made based on an evaluation of
4 both compliance testing (DMR data) and additional operational testing data by Engineer
5 Supervisor Julie Shane and Senior Direct Responsible Charge (DRC) and treatment plant
6 operator William "Bernie" Sadler; and on-site evaluation of the performance of individual unit
7 processes at the treatment plant.
8

9 14. The GWA determination that advanced primary treatment will not be required to
10 meet permit limitations has been validated by the performance improvements documented at the
11 plant from April to October 2007 as illustrated in DMRs submitted to the USEPA. The plant is
12 slightly out of compliance for total suspended solids and settleable solids. This is the best
13 performance of the facility in recent history.
14

15 15. The Northern District Wastewater Treatment Plant cannot meet the effluent
16 limitations until the USEPA issues a new NPDES permit for the facility. The current permit
17 hydraulic loading limits are based on plant operation at 50% of full capacity. The hydraulic
18 loading at the facility has increased due to population growth since the permit expired in 1991.
19 The fully functional facility has a design capacity of 12 million gallons per day. It is currently
20 operating at approximately 9 million gallons per day. The expired permit has a hydraulic loading
21 limitation of 6 million gallons per day.
22

23 16. The Stipulated Order requirement "to determine whether advanced primary treatment
24 is needed to comply with NPDES permit effluent limitations" implies that advanced primary
25 treatment, i.e. chemical addition, would be the only option to consider if the renovated plants had
26 not be able to achieve permit limits. In fact, paragraphs 39 and 42 require that GWA to
27 implement advanced primary treatment if the plants would have been unable to achieve
28 compliance. Due to the high cost of chemicals delivered to Guam, it is not clear that advanced
29 primary treatment would have a more economical life cycle costs than alternative treatment
30 methods. Strict adherence to this measure would force GWA to pursue advanced primary
31 treatment at the Northern District Wastewater Treatment Plant for failure to comply with an
32

1 outdated NPDES permit item as noted in item 15 above. This is not in the best interest of the
2 public health and the people of Guam.
3

4 17. GWA has determined that the performance of the Northern District Wastewater
5 Treatment Plant was being negatively impacted by uncontrolled dumping of septage into the
6 collection system by private haulers. GWA has implemented and is monitoring a septage
7 dumping program requiring all private haulers to register their pumping trucks with GWA, to
8 discharge only at GWA designated locations, and to discharge only allowable wastes. These
9 operational measures have been taken by GWA outside of the confines of the treatment facility
10 and outside of the specific Stipulated Order requirements for renovation the facility have been
11 instrumental in moving the facility toward full compliance with NPDES permits, without having
12 to resort to more costly advanced primary treatment.
13

14 18. It is currently clear that GWA evaluations of the treatment plants have not satisfied
15 the expectations of USEPA and that the USEPA believes that sufficient evaluation has yet to be
16 completed. This was made clear 4 months after the deadlines through the transmittal of a penalty
17 demand letter. Subsequent to the penalty demand, on November 27, GWA formally requested
18 that USEPA delineate the specific information that USEPA believed would be necessary to
19 satisfy paragraph 39 and 42 requirements for operational performance evaluation. Mike Lee
20 responded on November 27, 2007. The letter states that "The operational performance
21 evaluation (OPE) should be sufficient in nature to determine whether the sewage treatment plants
22 can comply with current NPDES permit effluent limitations and whether there is a need for
23 advance primary treatment." It is unclear how GWA can be expected to comply with
24 requirements that are established only after a fine has been levied. It is equally unclear the
25 purpose that will be served by completing the OPE as described in order to determine whether
26 the sewage treatment plants can comply when the plant either already complies or can be shown
27 to be able to comply through existing compliance and operational monitoring data.
28

29 19. The Agana Main Pump Station is one of over 70 GWA pump stations, many of
30 which ultimately discharge to the Hagatna Wastewater Treatment Plant. The operational failure
31 of any one of these pump stations would lead to raw untreated sewage discharging onto the
32 ground. An operational failure of any station located in close proximity to the coast is also likely

1 to lead to the discharge of raw untreated wastewater into the waters of the United States. Any of
2 these failures of a pump station would lead to an unpermitted discharge, but not a violation of the
3 treatment plant NPDES permit. The renovation of the Agana SPS is no more directly related to
4 GWA's ability to maintain continuous compliance with NPDES permit limits than other pump
5 stations. Since the Haganta Wastewater Treatment Plant has been shown to be in compliance
6 with NPDES discharge permits, the current operational condition of the Agana Main Pump
7 Station does not directly impact GWA's ability to maintain continuous compliance with NPDES
8 permit limits.

9
10 20. As previously noted the need for the renovation of the Agana Main pump station was
11 identified by GWA; communicated to USEPA; and was being implemented when it was added to
12 the revised stipulated order. GWA planned to complete the renovation of the station during the
13 shut down of the Hagatna wastewater treatment plant for renovation. This would have allowed
14 us to simply bypass the Agana pump station via gravity flow without having to implement
15 complicated bypass pumping facilities. We were not able to secure the necessary funding and
16 approvals to do the work concurrently. It is now necessary to implement the bypass pumping
17 measures as noted above or shut-down the newly renovated and fully compliant Hagatna
18 Wastewater Treatment Plant. We have chosen the former.

19
20 21. GWA has secured the necessary funding for the Agana Main Pump Station
21 renovation work; has executed the contract documents for the work; and is proceeding toward
22 the completion of the work.

23
24 22. During the design of the Hagatna wastewater treatment plant renovation in early
25 2006, GWA requested USEPA to indicate whether new NPDES permits would ultimately be
26 issued with the 301 (h) waiver (providing for primary treatment only), and with the same effluent
27 limitations as the expired permits. USEPA has not been able to provide a decisive answer
28 regarding continuance of the 301(h) waiver and permit effluent limits that can be expected
29 through subsequent renewal periods. USEPA communicated that we could expect the same
30 limitations through at least the next renewal period. The design and construction of the plant
31 renovation was based on these communications with USEPA and a design assumption that
32

1 permit limits would be the same as the expired permits under which we are currently operating
2 (with the exception of increase hydraulic loading at the Northern plant).
3

4 23. In a GWA/EPA meeting on December 3, 2007, Mike Lee communicated that
5 NPDES permits are not likely to be issued with the 301 (h) waivers as previously indicated. In
6 this case GWA will have invested over \$30 million and more than 3 years of time in the
7 renovation of the treatment plants and installation of new outfalls and will not be in compliance
8 with the permits that USEPA will issue for the facilities. Had USEPA provided decisive and
9 timely information, these compliance issues could have been addressed within the scope of the
10 recently completed effort - likely within nearly the same time frame - and more economically in
11 terms of both dollars and public perception.
12

13 24. USEPA has communicated to GWA that NPDES permits will not be issued until the
14 completion of new ocean outfalls for the Northern District and Hagatna Wastewater Treatment
15 Plants. The design of the new outfalls has been reviewed and approved by USEPA and Guam
16 EPA. GWA has executed a construction contract for these outfalls at a cost of approximately
17 \$17 million. The construction permit for this work has been approved by Guam EPA.
18

19 25. The design of the outfall for the Northern District Treatment Plant includes the
20 construction of a diffuser at the discharge point of the outfall. This diffuser is being constructed
21 at a cost of more than \$1 million. The inclusion of the diffuser in the designs assumes that a
22 mixing zone will be allowed by Guam EPA. A mixing zone allows for compliance with the
23 effluent quality standards of the receiving body at the boundaries of the mixing zone rather than
24 at the mouth of the discharge pipe.
25

26 26. In a GWA/EPA meeting on December 3, 2007, Guam EPA communicated that a
27 mixing zone may not be permitted. If that is the case, then more than \$1 million of GWA
28 customer/owner rates will have been wasted. The intent of this declaration is to illustrate that the
29 timing and nature of communication and responses from USEPA and Guam EPA has a direct
30 and significant impact on the ability of GWA to implement timely, well thought out, and
31 economical projects. USEPA has forced GWA to place the highest priority on stipulated order
32

1 projects. USEPA and Guam EPA have not allocated the same priority to their respective roles in
2 these projects.

3
4 27. Even if one were to assume that all USEPA contentions are correct, the ultimate
5 objective of these fines is not comprehensible. GWA is actively and aggressively working
6 toward the completion of these projects and has openly communicated our progress and
7 challenges with USEPA. The imposition of these fines will not make a captured audience more
8 attentive nor can it spur us to complete the projects more expeditiously when we are moving to
9 the best of our ability. The intent of the fines appears to be directed more toward protecting the
10 honor of the stipulated order document rather than achieving facility compliance and assuring the
11 public health.

12
13 28. Stipulated Order tasks are approximately 30% of the GWA project workload that is
14 necessary to maintain continuous improvement of the utility. Non-stipulated order projects are
15 equally important to the success of the utility. For example, the management of private
16 developments is critical to ensure that new infrastructure meets industry and GWA standards and
17 is done in a manner that facilitates efficient operation. The administration of the stipulated order
18 must not force GWA to pursue stipulated order projects at the exclusion of other critical efforts.


19
20 29. GWA has identified and communicated specific areas with which both USEPA and
21 Guam EPA can assist with the improvement of the utility. A focus on proactive measure to
22 assist GWA toward compliance would be more effective than administering fines from a location
23 removed from Guam by over 5000 miles. Previously identified areas requiring external
24 assistance include but are not limited to the following:

- 25
26
- 27 • Personnel: Assist with staffing of engineering through the support of additional
28 USPHS officer or directly through the placement of an EPA employee via an
29 individual employment agreement (IPA).
 - 30 • Fats, Oils, and Grease (FOG): GWA spends more than \$500,000 annually to
31 remove FOG from the wastewater collection system. GEPA has authority over
32 design criteria for grease interceptors which currently are not sufficient to
effectively prevent FOG from entering the system.

- Well Head Protection: GEPA is the regulatory authority for onsite wastewater disposal systems. Existing rules allow the installation of an onsite system within 300 feet of a well head and GEPA is permitting them accordingly. Simultaneously, GWA is being tasked to install community sewers in these same areas in order to protect well heads. A change to the rules is required and should be aggressively pursued.
- Onsite Water Systems: Onsite hydro-pneumatic systems at commercial developments and private residents are suspected of causing water hammer and/or low pressure in the distribution system due to poorly conceived or illegal connections. GEPA has communicated that sanitary surveys have identified such problems. Guam EPA can help GWA to eliminate water hammer that exaggerates system leaks by identifying these locations and helping us to enforce corrective action.

I declare under penalty of perjury under the laws of the Territory of Guam and the United States of America that the foregoing is true and correct.

Executed this 5th day of December, 2007 at Tamuning, Guam.


Donald Charles Antrobus
Chief Engineer
GWA Waterworks Authority